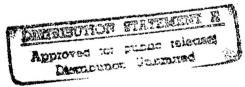
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PREFACE

This bibliography provides selective annotations of open-source material on two current issues:

- --nuclear developments in South Asia, and
- --tactics and organization of the Afghan resistance

The bibliography incorporates serials and monographs received in the previous month and is part of a continuing series on the above subjects.

Entries within each topic are arranged alphabetically by author or title. Call numbers for materials available in the Library of Congress are included to facilitate recovery of works cited.

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1. NUCLEAR DEVELOPMENTS IN SOUTH ASIA

GLOSSARY OF TERMS

AEMC

The Atomic Energy Minerals Center at Lahore is responsible for finding and recovering uranium ore, thereby filling a vital need stemming from boycotts of Pakistan by international nuclear fuel suppliers.

BARC

Bhabba Atomic Research Centre is located in north Bombay and is India's facility for research in and development of nuclear technology.

CHASHNUPP

Pakistan's Chashma Nuclear Power Plant, a projected 900-megawatt facility in Mianwali District, Punjab, was sanctioned in 1982 in order to create electrical power through light-water technology.

Cirus

A Candu-type Canadian-built plant located at BARC, Cirus was commissioned in 1960. India reprocessed spent fuel from Cirus to make the plutonium for its 1974 "peaceful nuclear explosion;" Cirus has a capacity of 40 megawatts.

Dhruva

One of the world's few high-flux reactors, Dhruva, which went critical in August 1985, is solely the product of Indian research and production, and therefore, falls completely outside IAEA safeguards. Dhruva shares facilities with Cirus, its neighbor in the BARC, has a 100-megawatt capacity, and can produce 30 kg of plutonium annually.

IAEA

International Atomic Energy Agency (United Nations)

Kalpakkam

This Tamil Nadu town is the site of the Indira Gandhi Atomic Research Center (formerly MAPP) and gives its name to a 40-megawatt fast-breeder reactor which went critical in August 1985 using plutonium-uranium carbide fuel.

KANUPP

Karachi Nuclear Power Plant, a 125-megawatt reactor, was supplied by Canada on a turnkey basis and became operational in 1972.

MAPP-1

Madras Atomic Power Project's first Candu-type 235-megawatt unit was commissioned in January 1984. The center is located at Kalpakkam, Tamil Nadu, and was produced completely by Indian research and technology; consequently, its units and the plutonium they produce fall outside IAEA inspection safeguards. MAPP units are intended to provide electricity for Madras. In October 1985, MAPP was renamed the Indira Gandhi Atomic Research Center, but new names for individual plants have not been made public.

MAPP-2

The second unit at Madras Atomic Power Project is also a Candu-type 235-megawatt plutonium and heavy-water reactor. MAPP-2 went critical in August 1985 and was commissioned in October of the same year.

NPT

The Nuclear Nonproliferation Treaty was ratified by the UN General Assembly in 1968. India and Pakistan contend that the NPT discriminates against nonnuclear states, but Pakistan has repeatedly offered to sign if India will do so simultaneously. In the UNGA, Islamabad voted in favor of the NPT.

PAEC

Pakistan Atomic Energy Commission

PINSTECH

Pakistan Institute of Nuclear Science Technology, the site of a US-supplied 5-megawatt "swimming pool"-type reactor installed in the 1960s

Tarapur

The Tarapur nuclear power plant, located near Bombay, was built by the United States. It has a capacity of 600 megawatts and can annually produce 50 to 80 kg of plutonium. Tarapur and its products come under IAEA inspection safeguards.

CITATIONS AND ABSTRACTS

Aleemi, Akmal. "Future of Nuclear Power Industry." <u>Pakistan</u>
<u>Times</u> (Lahore), 5 May 1986, p. 4.

India has six nuclear power stations with a total megawattage of 1,244, while neighboring Pakistan has a single 125 MW station and no immediate plans to build any more. This may put Pakistan further ahead than India financially, according to a new study released by World Watch. Cynthia Pollock, who conducted the research on behalf of the Washington-based independent research group, stated in a recent press conference that the cost of waste disposal and decommissioning of a nuclear power station would cost more than its construction price.

Basu, Biman. "Kalpakkam: A Milestone in India's Nuclear Quest." <u>Indian & Foreign Review</u> (New Delhi), vol. 23, no. 6, 15 January 1986, pp. 8-9, 24.

With the successful commissioning of its Fast Breeder Test Reactor (FBTR) at Kalpakkam near Madras in December 1985, India joined the select band of nations that possess this highly sophisticated technology. Only the United States, the Soviet Union, Britain, France, Japan, and West Germany have their own breeder programs. The author gives a fairly detailed rationale for India's move into the fast breeder reactor field and lauds India's nuclear scientists and the country's industrial sector for their close cooperation in developing an FBTR. The commissioning at the same time of a second 235 MW unit for the Madras Atomic Power Station was the "culmination of the efforts of India's nuclear scientists to become self-reliant in reactor design, fabrication, and operation," the author states. Some 22 new nuclear power reactors are scheduled to be built in India in the next 15 years.

Guha, Pathik. "How Safe Are India's Nuclear Plants?" <u>Telegraph</u> (Calcutta), 1 June 1986, p. 7.

In this long, fairly technical article, written in the wake of the Chernobyl disaster, the author casts doubt on the safety of India's nuclear plants. Past incidents of leakage and other accidents at India's plants in recent

years are detailed. Alarm is expressed over India's next generation of reactors, which the author says will lack some of the containment features, such as a shell structure covering the reactor vessel, present in the current generation of plants. Furthermore, the new reactors will be of the fast breeder type, which are "At a time when advanced described as the most dangerous. countries, such as the United States, Britain, France, and Italy are still experimenting with such a complex technology, India's headlong plunge into it has been severely criticized by experts," he notes. The author also regrets that India has no independent agency to maintain the safety aspects of nuclear reactors and that the chief advocates of nuclear power (including Prime Minister Rajiv Gandhi) "are in a dominant position, able to stifle all objections and criticism."

"India May Abandon Purchase of Soviet Plant." <u>Pakistan Times</u> (Lahore), 4 May 1986, p. 3.

The nuclear disaster at Chernobyl has upset Soviet plans to sell India two nuclear power plants of 480 MW each. The two plants, which use enriched uranium and a purified plant system of light water, are of the same type as the Chernobyl plant. Talks by an Indo-Soviet Joint Commission on the sale of the plants as part of an effort to improve the Soviet trade deficit with India, reportedly had reached a climax when the Chernobyl incident occurred. Observers say that it is obvious that India will no longer consider the Soviet offer. Indian nuclear experts now favor a double outer structure for their nuclear plants and other design changes based on their experience with the Tarapur plant near Bombay, which will be shut down in 1994 after 25 years of use.

"India, Israel Said to Plan Attack on Nuclear Plant." <u>Jang</u> (Lahore), 24 May 1986, p. 1. In JPRS-TND-86-012, 19 June 1986, p. 31.

India and Israel have finalized a joint plan to attack the Pakistani nuclear plant at Kahuta, according to the Lahore

newspaper <u>Jang</u>. Quoting without further identifying a report published in London, Jang states that the attack may take place at any time. Israel reportedly believes that Pakistan is now quite close to manufacturing an atomic bomb, the technology of which would probably be shared with the Arab world. The London report quotes an interview with an Israeli leader (unnamed in the Jang article) as stating that India and Israel, in their mutual interest, have a comprehensive plan to sabotage the Pakistan nuclear program. The plan was reportedly dicovered when a Pakistani Air Force pilot trainee was arrested on charges of spying for Israel. The report adds that Pakistani authorities suspect that a large number of Israeli agents, who have been trained in the United States, have infiltrated the Pakistani Government. Jang quotes technical experts as saying that Israeli bombers would fly to India where they would refuel before flying to Kahuta. India would not attack Kahuta by itself, according to the experts quoted by <u>Jang</u>. Pakistan has installed ground-to-air missiles around Kahuta and a detachment of a commando force is also assigned to guard the installation, according to Jang.

"Inside Kahuta." Foreign Report (London), 1 May 1986, pp.1-2.

Glimpses into both Pakistan and India's nuclear weapons programs are provided by this report. At Pakistan's Kahuta plant, Pakistani scientists have succeeded in enriching uranium more than 30 percent (nuclear bombs need 90 percent enrichment), even though the Pakistan Government agreed to a 5 percent enrichment limit set as a requirement for the current US aid package. Plans for the Kahuta centrifuges were obtained by Pakistani nuclear scientist Abdul Qader Khan while working for an uranium enrichment research plant in the Netherlands in the early (Khan was sentenced to 4 years in prison in absentia for stealing the plans; he was later acquitted on appeal on the grounds that he had not been summoned to the Pakistan reportedly expects to be able to produce about 10 kilograms of weapons-grade enriched uranium--enough for one bomb--every year from 1987 onwards. India's nuclear weapons efforts are more difficult to track because, as a more industrialized

country than Pakistan, it needs to buy fewer materials and equipment abroad. India has been successful in its efforts to buy heavy water abroad, despite international agreements designed to regulate the trade in heavy water and other nuclear materials. The British thwarted Indian attempts to buy two Swedish-made flash x-ray machines (an essential part of the design of hydrogen bombs) in 1985. The Swedes, however, are procrastinating on another attempt by India to buy the machines for fear of jeopardizing a large contract for howitzers signed with a Swedish arms manufacturer.

"Official on Radiation Level." Karachi Overseas Service, 25 May 1986. In JPRS-TND-86-012, 19 June 1986, p. 32.

There has been no significant rise in radiation levels in Pakistan since the Chernobyl nuclear disaster in May, according to Chairman of the Pakistan Atomic Energy Commission Munir Ahmed Khan. A moderate increase in radiation levels was measured between the 11th and 17th of June, but not at a level considered significant, he said.

"P.M. Dedicates Kalpakkam Reactor to the Nation." <u>Indian & Foreign Review</u> (New Delhi), vol. 23, no. 6, 15 January 1986, p. 23.

India is fully committed to the peaceful use of nuclear energy, Prime Minister Rajiv Gandhi said in dedicating to the nation the Fast Breeder Test Reactor (FBTR) and the second unit of the Madras Atomic Power Plant at Kalpakkam on 16 December 1985. Gandhi stated that all of the nuclear facilities in the country were engaged in the peaceful use of nuclear energy. The commissioning of the indigenously-designed FBTR will speed up implementation of India's nuclear program, according to the prime minister. "We propose to ensure that at least ten percent of the country's energy generation is from nuclear sources by the year 2000," he added.

"Pakistan Said Persisting in Nuclear Weapons Effort." <u>Foreign</u>
<u>Report</u> (London), 27 March 1986, pp. 1-2.

US officials have concluded that, not only can they not completely stop Pakistan's nuclear program, they cannot even limit it, according to this British report. past year, Pakistan has taken several more steps along the nuclear weapons path, including: attempting to buy several tons of pure graphite, which is used in the classic method of obtaining plutonium in a research reactor; purchasing six flash x-ray machines, which are used in tests of the design of nuclear weapons; attempting to have some of its scientists trained in the use of flash x-ray machines; attempting to obtain shipments of specially-toughened maraging steel used in centrifuges; and proposing to name the reported head of its bomb project, Abdul Qader Khan, as head of its National Atomic Energy Commission. Meanwhile, although clearly annoyed by Pakistan's actions, Reagan administration officials have agreed to a new \$4-billion aid package over the next 5 years. In order for the package to pass Congress, an understanding on limiting Pakistan's nuclear programs will have to be The previous \$3.2 billion aid package included an understanding that Pakistan would not enrich uranium beyond 5 percent, would not reprocess uranium, and would not test a nuclear bomb. Informed sources report, however, that Pakistan has succeeded in enriching uranium beyond 30 percent.

2. TACTICS AND ORGANIZATION OF THE AFGHAN RESISTANCE

GLOSSARY OF TERMS

Commander

A resistance fighter who is recognized as a military leader in local or regional areas of conflict; some commanders are respected outside their own regions, but there is not yet a coordinated, nationwide, insurgent command in Afghanistan. The title commander is the only honorific or rank recognized by the resistance movement.

Dushmani

(singular: <u>dushman</u>) Soviet pejorative term for Afghan insurgents; it means "bandit" and originated during the 1930s Central Asia resistance.

DRA

The Democratic Republic of Afghanistan was established as the result of a coup led by Mohammad Nur Taraki and Hafizullah Amin in April 1978. Deteriorating internal security led to military intervention by the Soviet Union in December 1979 and Amin was killed by the invading troops. The Soviet invasion transformed armed resistance toward the modernistic but arbitrary reforms of Taraki and Amin into a war of national liberation.

KHAD

DRA intelligence service whose operations are entirely directed by its many Soviet KGB advisors. The acronym stands for Khedmat-Etala'at-e-Daulati (State Information Service). KHAD received ministerial rank in January 1986.

Mujahideen

(singular: <u>mujahid</u>) This Islamic term means "holy warrior," but it is most often used as a name for Afghanistan's resistance fighters, who consider their campaign a <u>jihad</u> (holy war) to drive unbelievers from their country.

Spetznaz

Soviet special warfare troops under the GRU (Military Intelligence Directorate) of the Soviet Ministry of Defense. These highly mobile units are deployed throughout Afghanistan for operations which require more skill or loyalty than is commonly displayed by Soviet or DRA troops.

CITATIONS AND ABSTRACTS

"Afghan Brig. Defects to Pakistan." <u>Pakistan Times</u> (Lahore), 3 June 1986, p. 7.

Defecting DRA Brigadier Mir Alam Khan, now residing in Pakistan, reveals inside information on the workings of the aircraft repair factory at Bagram Airbase, where 3 or 4 war-damaged aircraft are repaired monthly by a 788-man workforce. Brigadier Mir Alam, a graduate of the Kabul Air Academy with knowledge of the operation of MIG-17s, MIG-21s, and MI-25 helicopters, reports that all Soviet aircraft in Afghanistan have been equipped with an engine-cooling appliance which protects them from attack by heat-seeking rockets.

"Afghan Rebels Said to Kill 10 Soviet Soldiers Near Kabul."

Washington Post, 25 June 1986, p. 18.

Western diplomats report that Afghan guerrillas successfully resisted a military sweep by Soviet and DRA troops in an encounter at a village 3 miles south of Kabul. The encounter, which occurred on 15 June, cost the Soviets at least 10 casualties and the destruction of two jets, a mobile communications unit, and 6 armored vehicles. Five mujahideen were reportedly killed. Diplomats also report that Soviet troops are poised to launch a major offensive in northern Afghanistan's strategic Panjshir Valley.

"Jawara Back in Resistance Control." <u>Afghan Information Center</u>
<u>Monthly Bulletin</u> (Peshawar), no. 62, May 1986, p 12.

This article states that the Western media succumbed to Soviet propaganda efforts which described the destruction of rebel Commander Haqani's base at Jawara in Paktia Province as a decisive victory over the resistance. The account of the fall of Jawara is over-publicized, and is tailored to mirror the Soviet version of the incident which ignores the high price in casualties exacted on the occupation troops. After a month of heavy fighting, the Soviets succeeded in raiding the resistance base on 23 April but then retreated to Khost a few days later.

Moffett, George D. III. "UN makes last-ditch try on Afghanistan." Christian Science Monitor (Boston), 5 May 1986, p. 3.

The author believes that if the latest United Nations-sponsored indirect or "proximity" negotiations between Pakistan and the DRA for a political settlement in Afghanistan are inconclusive, an eventual diplomatic resolution may never be possible. While US officials are not optimistic, they concede some significant new developments have taken place, notably Pakistan's President Zia-ul-Haq's agreement to eventual face-to-face talks with representatives of the Afghan government. is also the first time the DRA has offered a draft timetable for a phased-withdrawal of Soviet troops. Nevertheless, the Soviet Union, communicating via the DRA, continues to make several non-negotiable demands unacceptable to both Pakistan and the United States. These stipulate that military aid to the mujahideen must stop before a withdrawal of troops begins and that the Soviet Union continue a Finland-style security relationship with Kabul. This political stance contradicts the equally non-negotiable demands of the United States and Pakistan that there be a measure of simultaneity between a troop withdrawal and the cessation of outside aid and that a final settlement should leave Afghanistan's sovereignty unimpaired. The author believes that the Soviets may have already invested too much in the war (with some estimates of casualties ranging as high as 30,000) to settle for any return to a pre-war status quo. Meanwhile, the Soviets, facing little domestic pressure at home to end the war, can afford to patiently await a more favorable outcome to their war effort.

"Moscow's Withdrawal Ruse." <u>Far Eastern Economic Review</u> (Hong Kong), vol. 132, no. 24, 12 June 1986, p. 34. HC411.F18

The seventh round of the United Nations-sponsored "indirect" peace talks in Geneva between the DRA and Pakistan reached an impasse concerning the continued presence of 120,000 Soviet troops in Afghanistan and the timetable for their withdrawal. The DRA wants the Soviets to be allowed 3 to 4 years to pull out their troops while Pakistan believes this could be accomplished within 6

months. If the Soviets, through their DRA spokesman, can convince the world that they are sincere about a troop withdrawal and that it is only Pakistani quibbling over a time frame that is preventing them from doing so, they may achieve a major diplomatic coup and dampen the fervor, or stop altogether, the annual UN General Assembly vote condemning Moscow's military occupation of Afghanistan. The mujahideen, scornful of Soviet attempts to portray themselves as peace brokers and fearful of a cut-off in support of their cause, are likely to be another impediment blocking progress toward a settlement between Pakistan and Afghanistan.

"Nine Hundred Afghan Troops Reportedly Cross to Mujahideen."

New Strait Times (Kuala Lumpur), 29 April 1986, p. 59. In

JPRS-NEA-86-055, 29 April 1986, p.59.

Western diplomats report that 900 DRA troops deployed around Khost in Paktia Province defected to the mujahideen in early March. Miscalculating the situation after a lull in the fighting and overestimating the loyalty of the DRA troops, the Soviets pulled back into town to leave the Afghans to guard the area without direct supervision.

Ottaway, David B. "Administration's Signals Mixed on Afghans."

Washington Post, 20 June 1986, p. A30.

Visiting leaders of the newly formed Afghan Alliance seek Washington's formal recognition of their organization and support for their drive to make it the legitimate representative of Afghanistan at the United Nations. They are also trying to gain a seat at the ongoing UN-sponsored peace negotiations. The Reagan administration, however, resists early recogition of the Alliance, stating that it would be counterproductive and draw Soviet charges that the organization is an "American creature." The administration, instead, urges that the Alliance expand its support in the international community. Critics observe that the US government is sending mixed signals to the Afghan resistance leadership, declaring that UN talks must be "a process of negotiation among warring parties"

while continuing to back the UN-sponsored "proximity" talks, which include neither the freedom fighters nor the Soviets.

"Rebels in Afghanistan." <u>Wall Street Journal</u>, (New York), 25 April 1986, p. 1.

Afghan freedom fighters have received and begun employing weapons from an initial shipment of 200 Stinger missiles from the United States, according to a private US group. Heavy casualties from bombing raids on rebel positions in southeastern Afghanistan are also reported.

Rubinstein, Alvin Z. "Afghanistan at War." <u>Current History</u> (Philadelphia, PA) Vol. 85, March 1986, pp. 117-131. D410.C82

The author reflects on the tenacity, resourcefulness, and increasing sophistication of mujahideen organization and tactics as a counterforce to the Soviet's increased reliance on a "scorched-earth" strategy. The overwhelming Soviet superiority in firepower is slowly being thwarted. The Soviet Mi-24 "Hind" helicopter gunship, a machine with massive firepower, for example, was a thoroughly demoralizing challenge to the mujahideen, but better communications between rebel units, movement at night, and growing availability of shoulder-held surface-to-air missiles (American Stingers and Soviet SAM-7s) have restored some balance to the struggle. On the political front, there has been more cooperation among resistance parties, most recently with the forging of a united front in May 1985, when the 7 leading Peshawar-based resistance groups formed a coalition -- the Islamic Unity of Afghan Mujahideen. The author notes that despite the new coalition, deep political divisions among Mujahideen groups persist, but this makes it difficult for the Soviet Union to infiltrate and undermine them. The divisions also contribute to the emergence of local Mujahideen commanders inside Afghanistan as a force to be reckoned with in any possible future peace accord.

"U.S. Ties Split Afghan Rebels." Washington Post 18 June 1986, p. A29.

The question of whether or not to identify with the United States and to actively seek its support has proved to be a devisive issue among competing factions of the Afghan Alliance. Two fundamentalist leaders, Gulbaddin Hekmatyar of the Hezbi-i-Islami group and Rasul Saiaf, head of another smaller group, rebuked four other guerrilla leaders who met President Reagan in Washington, DC, with the false expectation of winning US diplomatic recognition. Hekmatyar and Saiaf stated that the US trip was not approved by the Alliance.